

AMERICAN SOCIETY FOR TESTING MATERIALS



~ BULLETIN ~

ENGINEERS' CLUB BUILDING.

1315 SPRUCE ST.

PHILADELPHIA, PA.

C. D. YOUNG, *President*

C. L. WARWICK, *Secretary-Treasurer*

NUMBER 2

JULY 25, 1921

Twenty-fourth Annual Meeting of the Society

THE Twenty-fourth Annual Meeting of the Society, held at the New Monterey Hotel, Asbury Park, N. J., June 21-24, 1921, was a most enjoyable and successful one. The attendance was very gratifying; there were 583 members present or represented, 116 guests and 131 ladies, or a total of 830. The number of members in attendance was only six less than a year ago and the total attendance was only 35 less, which is a remarkable showing that should be very gratifying to every member of the Society. The business meetings were all well attended and action was taken involving many existing and new standards. As usual, the committee activities during the meeting were marked. Approximately sixty meetings of committees and sub-committees were held during the week, including several joint committees with other societies.

Action on Standards and Tentative Standards

Complete minutes of the meeting are given in the accompanying Summary of Proceedings, which sets forth in detail the action of the meeting with respect to committee reports. Sixteen tentative standards and revisions in 47 existing standards were referred to letter ballot for adoption as standard. These are listed on a ballot which will be sent to each member in a day or two by first-class mail. With the exceptions indicated below, these tentative standards and revisions in existing standards were referred to letter ballot in the form recommended by the committees in their respective reports as preprinted, copies of which were distributed prior to the meeting to every member:

Additional revisions in four Forging Specifications of the Serial Designations A 18-18, A 19-18, A 63-18 and A 20-16, involving the method of heat treatment of forgings, were recommended by Committee A-1 on Steel, as given on pages 20-21 of the Summary of Proceedings, and approved for reference to letter ballot.

A typographical error in the proposed revisions in the Specifications for Boiler and Firebox Steel (A 30-18) is corrected in a footnote on page 20 of the Summary of Proceedings.

Additional revisions in the Specifications for Engine-Bolt Iron (A 40-18) were recommended by Committee A-2 on Wrought Iron, as given in the Summary of Proceedings, page 22, and approved for letter ballot.

Revisions in the Tentative Specifications for Extra-Refined Wrought-Iron Bars (A 79-19 T) were proposed by Committee A-2, as given in the Summary of Proceedings, pages 22-23. These revisions were approved and the specifications as revised referred to letter ballot.

Committee B-2 on Non-Ferrous Metals and Alloys proposed

at the meeting additional minor revisions in the Tentative Methods for Chemical Analysis of Alloys of Lead, Tin, Antimony and Copper (B 18-20 T) which appear in the Summary of Proceedings, pages 26-27. These revisions were approved and the methods as revised referred to letter ballot.

Sixteen tentative standards were revised in accordance with the committees' recommendations and continued as tentative. The remaining 32 tentative standards published in the 1920 Proceedings were continued as tentative without revision, and in addition 78 new tentative standards were accepted for publication.

New Officers Elected

The following officers were elected at the meeting:

President (for one year):

C. D. Young, General Supervisor of Stores, Pennsylvania System, Philadelphia, Pa.

Vice-President (for two years):

Guilliaem Aertsen, Assistant to the Vice-President, Midvale Steel and Ordnance Co., Philadelphia, Pa.

Members of Executive Committee (for two years):

F. R. Baxter, Chief of Testing Laboratory, Vacuum Oil Co., Rochester, N. Y.

E. D. Boyer, Cement Expert, Atlas Portland Cement Co., New York City.

F. M. Farmer, Chief Engineer, Electrical Testing Laboratories, New York City.

W. H. Fulweiler, Chief Chemist, United Gas Improvement Co., Philadelphia, Pa.

Society Unable to Join Federated American Engineering Societies at This Time

An outstanding feature of the meeting was the report of the Executive Committee on the invitation to the Society to become a charter member of the Federated American Engineering Societies. This report is printed in full in the Summary of Proceedings and led to the adoption by the meeting of the following resolution:

"Whereas, The American Society for Testing Materials has received an invitation to become a charter member of the Federated American Engineering Societies; and

"Whereas, After thorough consideration the Executive Committee, although believing that the stated objects for which the Federation is organized merit the support of engineering organizations and engineers in general, has recommended that the present finances of the Society do not permit the Society to accept membership in the Federation at this time; therefore, be it

Resolved, That the American Society for Testing Materials, after consideration of this invitation in annual meeting assembled, regrets to advise the Federated American Engineering Societies that it is financially unable at this time to accept the invitation to become a charter member of the Federation."

A motion to refer to letter ballot two questions, namely, "Shall the American Society for Testing Materials accept membership in the Federated American Engineering Societies?" and "Shall the Executive Committee be instructed to prepare proper amendments to the By-laws providing for an increase in dues to make this possible," which was offered first as an amendment to the original motion and later as a separate motion, was lost. The meeting then passed the following resolution:

Resolved, That it is the sense of this meeting that at the proper time in its judgment, the Executive Committee give further consideration to the matter of the Society joining the Federated American Engineering Societies.

Entertainment Features

The Entertainment Committee, under the able chairmanship of E. D. Boyer, provided pleasant recreation for all in attendance. The dance and smoker following the business session on Tuesday evening was well attended and thoroughly enjoyed. There were cards for the ladies and a boat ride on Deal Lake. An impromptu dance was held on Thursday evening. On Friday the Golf and Tennis Tournaments were held. There were thirty-six entries in the former and ten in the latter and both were pronounced highly successful. Prizes were awarded on Friday evening and the names of the winners of the various prizes are announced in the Summary of Proceedings. A number of members motored down to the meeting and enjoyed the beautiful rides in the vicinity of Asbury Park.

Preprints of Reports and Papers

Every item on the program with the exception of four papers was available in printed form at the meeting, making a total of 851 pages. A number of reports and papers, however, were not printed in time for distribution among the membership in advance of the annual meeting, so that members who did not attend the meeting have not received copies of them. With the thought in mind that many of these members will be interested in these reports and papers, an extra supply was printed, which is now available for distribution on request. These reports and papers are listed on the accompanying return blank. Members are asked to indicate by a cross those preprints that they desire and return the sheet to the Secretary-Treasurer, who will forward copies so long as the supply lasts.

Discussions of Reports and Papers

Members who desire may contribute discussions of reports and papers "by letter" until September 1, it being understood that proof of the complete discussion will be furnished to each committee or author in due course so that the discussion may be "closed" if desired.

Letter Ballot on New and Revised Standards

A blank ballot for the vote on the adoption as standard of 16 tentative standards and revisions in 47 standards will be sent in a day or two to every member by first-class mail. While it is not expected that members will vote on items with which they are not familiar, it is hoped that every member will record his vote in connection with matters on which he feels competent to vote. The ballot will be canvassed on August 20, 1921.

Specifications for Reinforced Concrete Proposed

The Joint Committee on Standard Specifications for Concrete and Reinforced Concrete transmitted under date of June 4 its first report to the constituent organizations, the American Society of Civil Engineers, American Society for Testing Materials, American Railway Engineering Association, American Concrete Institute and Portland Cement Association. This report contains Tentative Specifications for Concrete and Reinforced Concrete and was presented at the annual meeting, at which printed copies were available. The committee states in its report.

"The Joint Committee earnestly requests that every facility be provided by its constituent organizations for the fullest consideration of these Tentative Specifications in order that it may be in a position, as a result of their thorough discussion, to reflect in the final specifications the best current practice.

"The Joint Committee further calls attention to the fact that it has undertaken to prepare specifications covering the fundamentals to be observed in the general use of concrete and reinforced concrete; no attempt has been made to cover the details involved in the use of these materials in special structures. While the sections relating to design deal primarily with building construction, nevertheless the principles involved are in general applicable to structures of other types. It is expected that in using these specifications the necessary supplemental requirements will be added covering details."

The Tentative Specifications will be referred to the respective standing committees interested for criticism and recommendations, which are to be referred to the Joint Committee for consideration in revising its report.

American Engineering Standards Committee

Four A.S.T.M. standards were adopted on June 15, 1921, as Tentative American Standards by the American Engineering Standards Committee, namely, Standard Specifications for Soft or Annealed Copper Wire (B 3-15), Standard Specifications for Lake Copper Wire Bars, Cakes, Slabs, Billets, Ingots and Ingot Bars (B 4-13), Standard Specifications for Electrolytic Copper Wire Bars, Cakes, Slabs, Billets, Ingots and Ingot Bars (B 5-13) and Standard Methods of Battery Assay of Copper (B 34-20). In all, nine Society standards have been so adopted and others are being submitted for action by the Standards Committee.

Satisfactory progress is being made by the Society and the American Zinc Institute in the activities of the Sectional Committee on Zinc and Zinc Ores, for which these two organizations are sponsors under the procedure of the Standards Committee, as mentioned in the last issue of the Bulletin. The Sectional Committee was organized on April 21, 1921. W. H. Bassett, Technical Superintendent, American Brass Co., was elected chairman, and G. C. Stone, Metallurgist, New Jersey Zinc Co., secretary. The subject has been divided broadly into four parts, each of which has been placed in the charge of a sub-committee. Sub-Committee I is to consider and recommend methods of determining the weight and composition of shipments of ore on which settlement is to be made. Sub-Committee II is to recommend standard methods for the determination of zinc and impurities in ore, spelter and sheet zinc. Sub-Committee III will recommend and define grades of spelter with rejection limits. Sub-Committee IV will deal with the subject of sheet zinc, including gages and tolerances, and if desired, such tests as bending and stamping tests. Sub-Committees II and III held their first meetings at Asbury Park during the annual meeting of the Society, the former under the chairmanship of C. H. Fulton, Consulting Metallurgist, Bureau of Mines, and the latter under the chairmanship of W. B. Price, Chief Chemist and Metallurgist, Scovill Manufacturing Co.

New Standing Committees

The Executive Committee has authorized the appointment of two new standing committees:

Committee D-15 on Thermometers. The subject of thermometry, especially the matter of specifications for thermometers, has assumed such importance in the Society's work and has come to involve the activities of so many committees, that on the recommendation of Committee D-4 on Road Materials, supported by Committee E-1 on Methods of Testing, it was determined to organize a separate standing committee.

Committee E-9 on Materials Engineering Education. It has seemed important to the Executive Committee for the Society to devote some attention to the problem of engineering education, particularly with respect to the study of materials, in the engineering and technical colleges in the country. The new committee will include not only those engaged in the profession of engineering education, but also practicing engineers or representatives of firms who utilize the services of men specializing in materials engineering, in order that their knowledge of the development of this specialty can be contributed to the study of the problem. The Executive Committee will welcome suggestions from any of the members bearing upon this important undertaking

500 New Members in 1921

As stated in the April issue of the Bulletin, 500 new members is the mark that we have set for this year. Up to this time 250 new members have qualified so that we have acquired half of the number desired in a little more than half of the year. With the earnest efforts of the membership at large, we can secure 250 new members during the remainder of the year. On May 17 the Secretary-Treasurer addressed a personal letter to each member of the Society requesting that he secure one new member during the year. In response to this appeal 53 new members have qualified and 8 applications are on file, which is a fairly good showing. We can do much better, however, if each member will send the accompanying application blank, with a personal letter, to an individual or company who is interested in some field of the Society's activities and to whom membership would bring advantages; or will hand it in person to prospective members with a personal word concerning the Society and its activities. New members joining now and paying the membership dues (\$15) for the entire year will receive the regular 1921 publications, that is, bound copies of the triennial Book of A.S.T.M. Standards and the annual Proceedings, and so long as the supply lasts, copies of preprints of reports and papers presented at the recent meeting. Members joining now have the privilege under the By-laws of paying one-half of the annual dues, and in that case they will receive the Book of Standards but not the Proceedings.

A healthy growth of Society membership is natural, and necessary to our continued activity and success. As the Society's work expands, greater demand is made upon us to take up new problems and to reach out further into the field of engineering materials. The legitimate and most desirable way to provide the necessary funds is by increased numbers paying their quota of dues. Each member should feel a sense of personal responsibility for providing for our future by interesting desirable men and institutions in our work and inducing them to join in it.

The present membership is 2960. It should be at least 3200 at the end of this year.

Won't you get that one new member now? USE THE APPLICATION BLANK AT ONCE.

French Edition of Specifications Now Available

The U. S. Department of Commerce has completed the translation and publication of the French-English edition of 61 A.S.T.M. specifications particularly applicable to export trade. These specifications form part of the Industrial Standard Series, of which the Spanish-English editions of the same specifications were the beginning. The specifications include those for rails and splice bars, structural and reinforcing steels, steel forgings and castings, steel wheels and tires, steel and iron tubes and pipe, boiler steels, wrought-iron products, pig iron, cast-iron pipe, malleable and gray-iron castings, copper wire, copper bars, spelter, bronze, cement, linseed oil and turpentine. Copies are being distributed by the Government to commercial attachés and trade commissioners, and arrangements for distribution in other channels are being considered. Copies of the specifications may be obtained by addressing the Superintendent of Documents, Washington, D. C. A more complete statement will appear in the next issue of the Bulletin.

Society Publications

Proceedings will be issued this year in one volume (Vol. XXI, 1921), which will contain the committee reports, new and revised tentative standards, and the technical papers with discussion. It is hoped to distribute the Proceedings during November.

The 1921 Book of A.S.T.M. Standards will contain 161 standard specifications, methods, definitions and recommended practices in their latest revised form as determined by action at the recent annual meeting. This volume will contain approximately 1000 pages, and every effort is being made to have it ready for distribution during September.

Supplement to 1920 Year Book.—As announced in the Executive Committee report, the publication of the 1921 Year Book will be omitted as a measure of necessary economy, there being issued to each member in its place a supplement to the 1920 edition containing the list of officers, list of new members, revised list of standards and tentative standards, and other supplementary information of importance. This volume will also be distributed during September.

Book of A.S.T.M. Tentative Standards.—There are this year 126 tentative standards, of which many have been continued from the previous year without revision. Only the new and revised tentative standards will appear in the current Proceedings, but it is planned to publish as heretofore a volume containing all of the tentative standards for the convenience of members who desire to have them in one cover. Further announcement of this publication will be made and orders solicited in a later circular letter.

The following publications are on sale:

Proceedings from 1902 to 1920 inclusive (with the exception of Vols. I and III). Special prices are made to members for extra copies and for complete sets. Binding in paper, cloth or half leather.

Separate Standards.—Separate copies of the standards and tentative standards are available. Revised and new standards, subject to action by letter ballot of the Society, will be placed on sale August 22, 1921.

Miscellaneous.—Volume of annual reports of Committee D-1 on Preservative Coatings for Structural Materials for the years 1903-1914.

Progress report of the Joint Committee on Standard Specifications for Concrete and Reinforced Concrete, including Tentative Specifications for Concrete and Reinforced Concrete (1921).

Prices and further information concerning any publications of the Society will be gladly furnished. Inquiries and orders should be directed to:

AMERICAN SOCIETY FOR TESTING MATERIALS
1315 Spruce Street, Philadelphia.

Committee Notes

This space is reserved for items of general interest about committee activities. Officers of committees are invited to prepare information of suitable character for publication on this page.

Committee Meetings.

At Society headquarters:

D-1 on Preservative Coatings.....	Oct. 4
A-1 on Steel.....	Oct. 7
Executive Committee.....	Oct. 11
E-8 on Nomenclature.....	Nov. 11
E-1 on Methods of Testing.....	Nov. 18

New York City:

A-4 on Heat Treatment..... Oct. 14

Providence, R. I.

D-13 on Textile Materials..... Oct. 28

Committee A-1 on Steel is planning to extend its activities to include the study of tests and specifications for sheet steel. Inquiries received by the Society have indicated a need for information concerning this product. A representative sub-committee is being organized.

Committee A-3 on Cast Iron has two important problems under consideration: The discussion of the Specifications for Cast Iron Car Wheels adopted as tentative at the annual meeting, and the preparation of specifications for so-called "high-test" cast iron—usually designated as "semi-steel,"—a term which the committee believes should be discontinued even as a trade designation. The committee especially invites members who have had experience with this class of castings to give the committee the benefit of that experience.

Committee A-6 on Magnetic Properties, although not presenting a report this year, met during the annual meeting. Revisions in the Methods of Test for Magnetic Properties are under consideration, involving among other things the permeameters to be specified and the method for determining normal induction. A general investigation to cover all types of permeameters at present in use in this country is being discussed with the Bureau of Standards.

Committee A-8 on Magnetic Analysis met during the annual meeting to consider a report of its Sub-Committee on the Testing of Twist Drills. Steel for this investigation was tested for uniformity at the Bureau of Standards and made into twist drills, which have been given magnetic tests at the laboratories of a number of members of the committee. It is expected that a report on this investigation will be made later.

Committee C-3 on Brick has elected T. R. Lawson, Professor of Rational and Technical Mechanics, Rensselaer Polytechnic Institute, Troy, N. Y., as its chairman, to succeed H. T. Shelley, who has been elected vice-chairman.

Committee C-5 on Fireproofing has under consideration the preparation of specifications for fire tests of columns, to be included as a section of the Stand-

ard Specifications for Fire Tests of Materials and Construction (C 19-18.) The new section will be based on the results of the fire tests of columns recently completed by the Underwriters' Laboratories, the Bureau of Standards and the Associated Factory Mutual Fire Insurance Companies.

Committee C-6 on Drain Tile will now devote its energies to the investigation of chemical tests and chemical test requirements for drain tile, to determine their resistance to the action of alkalies and acids in the soil. Experimental researches are now under way.

Committee C-8 on Refractories is now under the chairmanship of R. C. Purdy, Consulting Ceramic Engineer, 1764 N. High Street, Columbus, Ohio. Mr. Purdy is also Organizing Secretary of the American Ceramic Society and in this way excellent means are provided for close cooperation between the Ceramic Society and the A.S.T.M. in the study of refractories.

Committee C-9 on Concrete and Concrete Aggregates, for many years under the chairmanship of Sanford E. Thompson, has elected Albert T. Goldbeck as the new chairman to succeed Mr. Thompson, who felt obliged to resign due to the pressure of other duties. Mr. Goldbeck is succeeded as secretary of the committee by J. C. Pearson of the Bureau of Standards.

Committee D-2 on Petroleum Products desires to receive criticisms and comments of the various methods of test included in its annual report and accepted as tentative by the Society. Arrangements are being made for wide distribution of the corrected report among the oil industry in order that these methods may be brought to the attention of all interested.

Committee D-5 on Coal proposes to classify and define terms relating to coal in the following groups:

1. Terms used in chemical analysis;
2. Terms used in reporting coal analyses, such as "dry coal";
3. Trade terms classifying coals such as "gas coal", "by-product coal", etc.

Committee D-6 on Coke reports that coke producers and consumers alike have indicated their interest in the proposed shatter and hardness tests, as well as the tests for combustibility of coke in air and CO₂. The committee is planning extensive investigations along these lines and it is believed much valuable data will be obtained by correlating the physical and chemical tests of coke with actual furnace operation.

Committee D-7 on Timber has included in its annual report a most interesting and instructive resumé of timber tests, comprising a brief historical statement together with certain fundamental considerations as to working stresses in structural timber. It is proposed to continue this work looking forward to a definite analysis and correlation of the data so far available.

Committee D-13 on Textile Materials has now arranged its activities so that at the June meeting work for the coming year is discussed, a broad program laid out and problems delegated to the sub-committees. At the fall meeting preliminary reports are offered and constructive criticism invited. At the spring meeting the sub-committees are expected to submit definite reports in suitable form for submission to letter ballot. To avoid delay the sub-committees are authorized where necessary to send out a general questionnaire to the textile industry.

Committee D-13 was originally organized to meet the need for standards for mechanical fabrics of high degree of uniformity, and the committee has so far confined its activities to such standards. The test methods that have been developed, however, have been made general enough to be applicable to practically all textiles. Through the help that the committee has been able to offer to those producing and using mechanical fabrics, its field has quite naturally broadened so that it is now considering standards covering such matters as Test Methods and Measurements for Fibers, Test Methods and Specifications for Yarns, Specifications for Fabrics, Nomenclature for Fabrics, and Specifications for Fabric Testing Machines.

Committee E-1 on Methods of Testing has a number of important matters under consideration, among them the revision and extension of the Methods of Mechanical Testing of Metallic Materials, study of certain physical tests of cementitious materials, such as those for fineness, tensile strength, plasticity, consistency, etc., review of the methods of tests included in the tentative standards, and the development among the committees of the study of so-called suitability tests of materials as distinguished from control tests.

Committee E-2 on Electrical Standards has been discontinued, at its own request, by the Executive Committee. This committee was appointed for the purpose of coordinating those activities of the Society touching the electrical field with the work of such organizations as the American Institute of Electrical Engineers that deal wholly with electrical matters. However, means for keeping the Society in touch with electrical matters are now adequately provided through our participation in the work of the American Engineering Standards Committee.

Committee E-8 on Nomenclature and Definitions will undertake during the year the consideration of definitions of terms relating to concrete and concrete aggregates and terms relating to the gypsum industry, as well as of definitions of terms proposed as tentative at the annual meeting. The object is to aid committees in the preparation of definitions and to harmonize conflicting definitions where they occur.